UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,468	07/01/2003	Manabu Kodate	059695-0102	1060

22428 7590 07/24/2008
FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER	
PIZIALI, JEFFREY J	
ART UNIT	PAPER NUMBER
2629	

MAIL DATE	DELIVERY MODE
07/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/609,468	KODATE ET AL.	
	Examiner	Art Unit	
	Jeff Piziali	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4,5,8,16-18 and 21-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4,5,8,16-18 and 21-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 February 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings were received on 10 February 2006. These drawings are still acceptable.

3. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the figures.

Specification

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 4, 5, 8, 16-18, and 21-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 4 is indefinite where it specifies "***a predetermined surface***" (in lines 17 and 20), since "***predetermined***," according to applicant's definition, merely means "*determined beforehand*."

For example: It would be unclear to one having ordinary skill in the art who, or what, is intended to perform such a "*determination*." Furthermore, it would be unclear to an artisan precisely at what point in time such a "*determination*" is intended to be made.

See Joseph E. Seagram & Sons, Inc. V. Marzall, Comr. Pats., 84 USPQ 180 (Court of Appeals, District of Columbia).

8. The term "***substantially equal***" in claim 5 (line 2) is a relative term which renders the claim indefinite. The term "***substantially equal***" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

For example: It would be unclear to one having ordinary skill in the art what degree or range of equality precision is intended to be required before qualifying as "***substantially equal***". Does "*99.9% equal*" constitute "***substantially equal***"? How about 90%? Or 51%?

9. Claim 5 recites the limitation "*a potential of a scan line other than* ***the one of the scan lines***" (in line 2). There is insufficient antecedent basis for this limitation in the claim.

10. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: "***display signals***" (in claim 8, line 3) and "***display signals***" (in claim 4, line 2).

For example: It would be unclear to one having ordinary skill in the art what structural and/or operational relationship exists between the claimed "***display signals***" limitations.

Is a single, identical set of "***display signals***" being claimed? Or are a plurality of different, distinct, and different sets of "***display signals***" being claimed?

11. Claim 8 recites the limitation "***the display signals***" (in lines 5 and 12). There is insufficient antecedent basis for this limitation in the claim.

For example: It would be unclear to one having ordinary skill in the art whether each limitation recitation is intended to refer to the earlier claimed "***display signals***" (in claim 8, line 3) and/or "***display signals***" (in claim 4, line 2).

12. Claim 16 is indefinite where it specifies "***a predetermined surface***" (in lines 18 and 21), since "***predetermined***," according to applicant's definition, merely means "*determined beforehand*."

For example: It would be unclear to one having ordinary skill in the art who, or what, is intended to perform such a "*determination*." Furthermore, it would be unclear to an artisan precisely at what point in time such a "*determination*" is intended to be made.

See Joseph E. Seagram & Sons, Inc. V. Marzall, Comr. Pats., 84 USPQ 180 (Court of Appeals, District of Columbia).

13. The term "***substantially equal***" in claim 17 (line 2) is a relative term which renders the claim indefinite. The term "***substantially equal***" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

For example: It would be unclear to one having ordinary skill in the art what degree or range of equality precision is intended to be required before qualifying as "***substantially equal***". Does "*99.9% equal*" constitute "***substantially equal***"? How about 90%? Or 51%?

14. Claim 17 recites the limitation "*a potential of a scan line other than* ***the one of the scan lines***" (in line 2). There is insufficient antecedent basis for this limitation in the claim.

15. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: "***a first scan line***" (in claim 18, line 8); "***a second scan line***" (in claim 18, line 12); "***a plurality of scan lines***" (in claim 16, line 4); and "***one of the scan lines***" (in claim 16, line 7).

For example: It would be unclear to one having ordinary skill in the art what structural and/or operational relationship exists between the claimed "***scan line(s)***" limitations.

Is the "***first scan line***" common to the earlier claimed "***plurality of scan lines***"? Is the "***second scan line***" common to the earlier claimed "***plurality of scan lines***"?

Is the "***first scan line***" identical to the earlier claimed "***one of the scan lines***"? Is the "***second scan line***" identical to the earlier claimed "***one of the scan lines***"?

Or are the "***first scan line***" and/or the "***second scan line***" distinct, different, and independent from all earlier claimed "***scan lines***"?

An omitted structural cooperative relationship results from the claimed subject matter: "***the supply of the first display signal***" (in claim 18, line 5) and "***a supply of the first display signal***" (in claim 18, line 9).

For example: It would be unclear to one having ordinary skill in the art what structural and/or operational relationship exists between the claimed "***supply***" limitations.

Is a single, identical "***supply***" being claimed? Or are a plurality of different, distinct, and different "***supplies***" being claimed?

16. The remaining claims are rejected under 35 U.S.C. 112, second paragraph, as being dependent upon rejected base claims.

17. Claims 4, 5, 8, 16-18, and 21-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

As a courtesy to the Applicant, the examiner has attempted to also make rejections over prior art -- based on the examiner's best guess interpretations of the invention that the Applicant is intending to claim.

However, the indefinite nature of the claimed subject matter naturally hinders the Office's ability to search and examine the application.

Any instantly distinguishing features and subject matter that the Applicant considers to be absent from the cited prior art is more than likely a result of the indefinite nature of the claims.

The Applicant is respectfully requested to correct the indefinite nature of the claims, which should going forward result in a more precise search and examination.

Claim Rejections - 35 USC § 102

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

19. Claims 4, 5, 16, 17, and 21-28 are rejected under 35 U.S.C. 102(a) as being anticipated by the instant ***Application's Admitted Prior Art (AAPA)***.

Regarding claim 4; the ***AAPA*** discloses an image display element, comprising:

a plurality of data lines to which display signals are applied (see the entire document, including Page 1, Line 19),

the data lines being embedded in a first substrate [e.g., TFT array substrate];

a plurality of scan lines to which scan signals are applied (see the entire document, including Page 1, Line 19),

the scan lines being embedded in the first substrate (see the entire document, including Page 1, Lines 10-25);

a first wire [e.g., Fig. 6B; 32] electrically connected to one of the scan lines;

a second wire [e.g., Fig. 6B; 33] arranged at a first distance of less than or equal to 10μm [e.g., Fig. 6A -- $L < 5\mu m$] from the first wire;

a second substrate [e.g., Fig. 10; 48] that is disposed opposite to the first substrate at a second distance from the first substrate;

a liquid crystal layer [e.g., Fig. 10; 50] disposed between the first and second substrates,

the liquid crystal layer having a thickness; and

a spacer [e.g., Fig. 6B; 34] disposed between the first and second substrates,

the spacer prescribing the thickness of the liquid crystal layer,

wherein the first wire has a predetermined surface [e.g., Fig. 6B; top surface of 32] that does not directly abut the first substrate,

the predetermined surface of the first wire being disposed on a side [e.g., top side of the TFT array substrate] of the first substrate that directly abuts the liquid crystal layer (see the entire document, including Fig. 6B),

wherein the second wire has a predetermined surface [e.g., Fig. 6B; top surface of 33] that does not directly abut the first substrate,

the predetermined surface of the second wire being disposed on the side of the first substrate that directly abuts the liquid crystal layer, and

wherein the spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer (see the entire document, including Fig. 6B; Page 13, Line 8 - Page 14, Line 22).

Regarding claim 5; the ***AAPA*** discloses a potential of the second wire is substantially equal to a potential of a scan line other than the one scan line (see the entire document, including Page 13, Lines 8-21).

Regarding claim 16, this claim is rejected by the reasoning applied in rejecting claim 4; furthermore, the ***AAPA*** discloses a data line driving circuit and a scan line driving circuit (see the entire document, including Page 1, Lines 10-25).

Regarding claim 17, this claim is rejected by the reasoning applied in claim 5.

Regarding claim 21; the ***AAPA*** discloses the first distance from the second wire to the first wire is less than or equal to 5μm [e.g., Fig. 6A; wherein the distance measurement is taken from the left-side edge of the first wire to the right-side edge of the second wire, for instance] (see the entire document, including Page 13, Line 8 - Page 14, Line 22).

Regarding claim 22, this claim is rejected by the reasoning applied in claim 21.

Regarding claim 23; the ***AAPA*** discloses one of the first and second wires is in direct physical contact with the liquid crystal layer (see the entire document, including Fig. 10).

Regarding claim 24; the ***AAPA*** discloses the spacer extends through the thickness of the liquid crystal layer such that the spacer is in direct physical contact with the at least one of the first and second wires, the first substrate, and the second substrate (see the entire document, including Fig. 6B).

Regarding claim 25; the ***AAPA*** discloses the liquid crystal layer is in direct physical contact with the first substrate and the second substrate (see the entire document, including Fig. 10; Page 21, Lines 10-11).

Regarding claim 26, this claim is rejected by the reasoning applied in claim 23.

Regarding claim 27, this claim is rejected by the reasoning applied in claim 24.

Regarding claim 28, this claim is rejected by the reasoning applied in claim 25.

Claim Rejections - 35 USC § 102 / 103

20. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

22. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

23. Claims 4, 5, 16, 17, and 21-28 are rejected under 35 U.S.C. 102(b) as anticipated by ***Castleberry (US 4,904,056 A)***.

24. Or, in the alternative, under 35 U.S.C. 103(a) as obvious over ***Castleberry (US 4,904,056 A)*** in view of the instant ***Application's Admitted Prior Art (AAPA)***.

25. Or, in the alternative, under 35 U.S.C. 103(a) as obvious over the instant ***Application's Admitted Prior Art (AAPA)*** in view of ***Castleberry (US 4,904,056 A)***.

Regarding claim 4; ***Castleberry*** discloses an image display element [e.g., liquid crystal display device], comprising:

a plurality of data lines [e.g., Figs. 4A & 7; 32] to which display signals are applied,

the data lines being embedded in a first substrate [e.g., Fig. 3; 20];

a plurality of scan lines [e.g., Figs. 4A & 7; 31] to which scan signals are applied,

the scan lines being embedded in the first substrate (see the entire document, including Fig. 4A);

a first wire [e.g., Fig. 4A; 31; or alternatively Figs. 3 & 4D; 39] electrically connected to one of the scan lines;

a second wire [e.g., Figs. 3 & 4A; 32] arranged at a first distance of less than or equal to 10μm from the first wire;

a second substrate [e.g., Fig. 3; 38] that is disposed opposite to the first substrate at a second distance [e.g., Fig. 3; T] from the first substrate;

a liquid crystal layer [e.g., Fig. 3; 50] disposed between the first and second substrates,

the liquid crystal layer having a thickness [e.g., Fig. 3; T]; and

a spacer [e.g., Figs. 3 & 4E; 40a] disposed between the first and second substrates,

the spacer prescribing the thickness of the liquid crystal layer,

wherein the first wire has a predetermined surface [e.g., Fig. 4A; top surface of 31; or alternatively Figs. 3 & 4D; top surface of 39] that does not directly abut the first substrate,

the predetermined surface of the first wire being disposed on a side [e.g., Fig. 3; top side 20] of the first substrate that directly abuts the liquid crystal layer,

wherein the second wire has a predetermined surface [e.g., Figs. 3 & 4A; top surface of 32] that does not directly abut the first substrate,

the predetermined surface of the second wire being disposed on the side of the first substrate that directly abuts the liquid crystal layer, and

wherein the spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer (see the entire document, including Fig. 3; Column 5, Line 4 - Column 7; Line 44).

Should it be shown that ***Castleberry*** discloses a claimed feature [e.g., a first distance of less than or equal to 10μm] with insufficient specificity:

The ***AAPA*** discloses an image display element, comprising:

a plurality of data lines to which display signals are applied (see the entire document, including Page 1, Line 19),

the data lines being embedded in a first substrate [e.g., TFT array substrate];

a plurality of scan lines to which scan signals are applied (see the entire document, including Page 1, Line 19),

the scan lines being embedded in the first substrate (see the entire document, including Page 1, Lines 10-25);

a first wire [e.g., Fig. 6A; 32] electrically connected to one of the scan lines;

a second wire [e.g., Fig. 6A; 33] arranged at a first distance of less than or equal to 10μm [e.g., Fig. 6A -- $L < 5\mu m$] from the first wire (see the entire document, including Page 13, Line 8 - Page 14, Line 22);

a second substrate [e.g., Fig. 10; 48] that is disposed opposite to the first substrate at a second distance from the first substrate;

a liquid crystal layer [e.g., Fig. 10; 50] disposed between the first and second substrates,

the liquid crystal layer having a thickness; and

a spacer [e.g., Fig. 10; 51] disposed between the first and second substrates,

the spacer prescribing the thickness of the liquid crystal layer,

wherein the first wire has a predetermined surface [e.g., Fig. 6A; top surface of 32; Fig. 10; top surface of 47] that does not directly abut the first substrate,

the predetermined surface of the first wire being disposed on a side [e.g., top side of the TFT array substrate] of the first substrate that directly abuts the liquid crystal layer (see the entire document, including Fig. 10),

wherein the second wire has a predetermined surface [e.g., Fig. 6A; top surface of 33] that does not directly abut the first substrate,

the predetermined surface of the second wire being disposed on the side of the first substrate that directly abuts the liquid crystal layer (see the entire document, including Fig. 10; Page 21, Line 9 - Page 22, Line 14).

Arguably, the ***AAPA*** neglects expressly disclosing the spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no

portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer.

Castleberry and the ***AAPA*** are analogous art, because they are both from the shared field of liquid crystal display devices.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to use ***Castleberry's*** spacer [e.g., Figs. 3 & 4E; 40a] as the ***AAPA's*** spacer [e.g., Fig. 10; 51], so as to incorporate a spacer material and structure which also performs a light blocking function [e.g., ***Castleberry:*** Column 1, Lines 10-15], resulting in a spacer that is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer, as instantly claimed.

It would have been obvious to one of ordinary skill in the art at the time of invention because all the claimed elements were known in the prior art and one skilled in the art could have combined ***Castleberry's*** teachings [e.g., light blocking spacers] with the ***AAPA's*** image display element as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of invention, because the substitution of one known spacer for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of invention, because the technique for improving (by providing light blocking functionality) this particular class of display device was part of the ordinary skill in the art, in view of the teaching of the technique for improvement in other situations.

It would have been obvious to one of ordinary skill in the art at the time of invention, because this particular known light blocking spacer technique was recognized as part of the ordinary capabilities of one skilled in the art.

It would have been obvious to one of ordinary skill in the art at the time of invention, because a person of ordinary skill has good reason to pursue the known options within his or her technical grasp (i.e., providing light blocking functionality spacers). If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense.

It would have been obvious to one of ordinary skill in the art at the time of invention, because design incentives or market forces provided a reason to make a light blocking spacer adaptation, and the invention resulted from application of the prior knowledge in a predictable manner.

See KSR International Co. v. Teleflex Inc., et al., Docket No. 04-1350 (U.S. 30 April 2007).

Moreover, it would have been obvious to one having ordinary skill in the art at the time of invention to use the ***AAPA's*** teaching of a wire-to-wire distance of less than or equal to 10μm [e.g., Fig. 6A -- L < 5μm] between ***Castleberry's*** wires, so as to minimize the size taken up by ***Castleberry's*** wiring**.**

It would have been obvious to one of ordinary skill in the art at the time of invention because all the claimed elements were known in the prior art and one skilled in the art could have combined the ***AAPA's*** teachings [e.g., wire-to-wire distances] with ***Castleberry's*** image display element as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of invention, because the substitution of one known wire-to-wire distance for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of invention, because the technique for improving (by minimizing wire-to-wire distances) this particular class of display device was part of the ordinary skill in the art, in view of the teaching of the technique for improvement in other situations.

It would have been obvious to one of ordinary skill in the art at the time of invention, because this particular known minimizing wire-to-wire distance technique was recognized as part of the ordinary capabilities of one skilled in the art.

It would have been obvious to one of ordinary skill in the art at the time of invention, because a person of ordinary skill has good reason to pursue the known options within his or her technical grasp (i.e., placing wires closer together). If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense.

It would have been obvious to one of ordinary skill in the art at the time of invention, because design incentives or market forces provided a reason to make a minimized wire-to-wire distance adaptation, and the invention resulted from application of the prior knowledge in a predictable manner.

See KSR International Co. v. Teleflex Inc., et al., Docket No. 04-1350 (U.S. 30 April 2007).

Regarding claim 5; ***Castleberry*** discloses a potential of the second wire is substantially equal to a potential of a scan line other than the one of the scan lines (see the entire document, including the Abstract; Column 3, Lines 20-57; Column 7, Lines 26-44).

The ***AAPA*** discloses a potential of the second wire is substantially equal to a potential of a scan line other than the one scan line (see the entire document, including Page 13, Lines 8-21).

Regarding claim 16, this claim is rejected by the reasoning applied in claim 4; furthermore, ***Castleberry*** discloses an image display device [e.g., liquid crystal display device], comprising:

a data line driving circuit that supplies display signals to a plurality of data lines [e.g., Figs. 4A & 7; 32];

a scan line driving circuit that supplies scan signals to a plurality of scan lines [e.g., Figs. 4A & 7; 31];

a first wire [e.g., Fig. 4A; 31; or alternatively Figs. 3 & 4D; 39] embedded on a first substrate [e.g., Fig. 3; 20],

the first wire being electrically connected to one of the scan lines;

a second wire [e.g., Figs. 3 & 4A; 32] embedded on the first substrate,

the second wire being arranged at a first distance of less than or equal to 10μm from the first wire;

a second substrate [e.g., Fig. 3; 38] that is disposed opposite to the first substrate at a second distance from the first substrate;

a liquid crystal layer [e.g., Fig. 3; 50] disposed between the first and second substrates,

the liquid crystal layer having a thickness [e.g., Fig. 3; T];

a spacer [e.g., Figs. 3 & 4E; 40a] disposed between the first and second substrates,

the spacer prescribing the thickness of the liquid crystal layer,

wherein the first wire has a predetermined surface [e.g., Fig. 4A; top surface of 31; or alternatively Figs. 3 & 4D; top surface of 39] that does not directly abut the first substrate,

the predetermined surface of the first wire being disposed on a side [e.g., Fig. 3; top side 20] of the first substrate that directly abuts the liquid crystal laver,

wherein the second wire has a predetermined surface [e.g., Figs. 3 & 4A; top surface of 32] that does not directly abut the first substrate,

the predetermined surface of the second wire being disposed on the side of the first substrate that directly abuts the liquid crystal laver, and

wherein the spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer (see the entire document, including Fig. 3; Column 5, Line 4 - Column 7; Line 44).

The ***AAPA*** discloses a data line driving circuit and a scan line driving circuit (see the entire document, including Page 1, Lines 10-25).

Regarding claim 17, this claim is rejected by the reasoning applied in claim 5.

Regarding claim 21; ***Castleberry*** discloses the first distance from the second wire to the first wire is less than or equal to 5μm (see the entire document, including Figs. 3, 4A, 4C, 5, and 6; Column 2, Lines 42-59 and Column 4, Line 39 - Column 8, Line 2).

The ***AAPA*** discloses the first distance from the second wire to the first wire is less than or equal to 5μm [e.g., Fig. 6A; wherein the distance measurement is taken from the left-side edge of the first wire to the right-side edge of the second wire, for instance] (see the entire document, including Page 13, Line 8 - Page 14, Line 22).

Regarding claim 22, this claim is rejected by the reasoning applied in claim 21.

Regarding claim 23; ***Castleberry*** discloses one of the first and second wires is in direct physical contact with the liquid crystal layer (see the entire document, including Fig. 3; the Abstract; Column 3, Lines 20-57; Column 7, Lines 26-44).

The ***AAPA*** discloses one of the first and second wires is in direct physical contact with the liquid crystal layer (see the entire document, including Fig. 10).

Regarding claim 24; ***Castleberry*** discloses the spacer extends through the thickness of the liquid crystal layer such that the spacer is in direct physical contact with the at least one of the first and second wires, the first substrate, and the second substrate (see the entire document, including Fig. 3).

The ***AAPA*** discloses the spacer extends through the thickness of the liquid crystal layer such that the spacer is in direct physical contact with the at least one of the first and second wires, the first substrate, and the second substrate (see the entire document, including Fig. 10).

Regarding claim 25; ***Castleberry*** discloses the liquid crystal layer is in direct physical contact with the first substrate and the second substrate (see the entire document, including Fig. 2; the Abstract; Column 3, Lines 20-57; Column 7, Lines 26-44).

The ***AAPA*** discloses the liquid crystal layer is in direct physical contact with the first substrate and the second substrate (see the entire document, including Fig. 10; Page 21, Lines 10-11).

Regarding claim 26, this claim is rejected by the reasoning applied in claim 23.

Regarding claim 27, this claim is rejected by the reasoning applied in claim 24.

Regarding claim 28, this claim is rejected by the reasoning applied in claim 25.

Claim Rejections - 35 USC § 103

26. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Castleberry (US 4,904,056 A)*** in view of ***Kwon (US 6,486,930 B1)***.

27. Or, in the alternative, under 35 U.S.C. 103(a) as obvious over ***Castleberry (US 4,904,056 A)*** and the instant ***Application's Admitted Prior Art (AAPA)*** as applied respectively to claims 4 and 16 above, and further in view of ***Kwon (US 6,486,930 B1)***.

Regarding claim 8, arguably neither ***Castleberry (US 4,904,056 A)*** nor the ***AAPA*** expressly discloses the particular display element arrangement of pixel electrodes and switching devices as claimed.

However, ***Kwon*** discloses a first pixel electrode [e.g., Fig. 5A; 71c] and a second pixel electrode [e.g., Fig. 5A; 73c] that are supplied with display signals from one of the data lines [e.g., Fig. 5A; D1];

a first switching device [e.g., Fig. 5A; 71b] that controls a supply of the display signals in the one of the data tine lines,

wherein the first switching device is electrically connected between the one of the data lines and the first pixel electrode,

the first switching device having a gate electrode;

a second switching device [e.g., Fig. 5A; 71a] that is electrically connected between the gate electrode of the first switching device and the one of the scan lines [e.g., Fig. 5A; G1]; and

a third switching device [e.g., Fig. 5A; 73] that is connected to the one of the data lines, the third switching device controlling a supply of the display signals to the second pixel electrode (see the entire document, including Column 3, Line 59 - Column 4, Line 36).

Castleberry, the ***AAPA***, and ***Kwon*** are analogous art, because they are all from the shared field of active matrix liquid crystal display devices.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use ***Castleberry's*** light blocking spacer teachings with ***Kwon's*** multiplexed image structure, so as to provide a light blocking function with an active matrix LCD arrangement providing high resolution at low cost.

Moreover, it would have been obvious to one of ordinary skill in the art at the time of invention to use the substrate fabrication techniques of the ***AAPA*** to manufacture ***Kwon's*** multiplexed image structure, so as to reduce the necessary number of data lines, resulting in the invention as instantly claimed.

Regarding claim 18, this claim is rejected by the reasoning applied in claim 8; furthermore, ***Kwon*** discloses a first pixel electrode [e.g., Fig. 5A; 73c] and a second pixel

electrode [e.g., Fig. 5A; 71c] that are supplied with a first display signal from the display signals from the data line driving circuit via a same first data line [e.g., Fig. 5A; D1];

a first switching device [e.g., Fig. 5A; 73] that controls the supply of the first display signal from the first data line to the first pixel electrode,

the first switching device being driven based on a first scan signal from the scan signals supplied from the scan line driving circuit via a first scan line [e.g., Fig. 5A; G1];

a second switching device [e.g., Fig. 5A; 71b] that controls a supply of the first display signal from the first data line to the second pixel electrode,

the second switching device being driven based on a second scan signal [e.g., Fig. 5A; G2] from the scan signals supplied from the scan line driving circuit via a second scan line subsequent to the first scan line; and

a third switching device [e.g., Fig. 5A; 71a] that is driven based on the first scan signal supplied from the first scan line,

the third switching device controlling ON and OFF of the second switching device (see the entire document, including Column 3, Line 59 - Column 4, Line 36).

28. Claims 4, 5, 16, 17, 21, 22, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the instant ***Application's Admitted Prior Art (AAPA)*** in view of ***Watanabe et al (US 5,150,239 A)***.

Regarding claim 4, the ***AAPA*** discloses an image display element, comprising:

a plurality of data lines to which display signals are applied (see the entire document, including Page 1, Line 19),

the data lines being embedded in a first substrate [e.g., TFT array substrate];

a plurality of scan lines to which scan signals are applied (see the entire document, including Page 1, Line 19),

the scan lines being embedded in the first substrate (see the entire document, including Page 1, Lines 10-25);

a first wire [e.g., Fig. 6A; 32] electrically connected to one of the scan lines;

a second wire [e.g., Fig. 6A; 33] arranged at a first distance of less than or equal to 10μm [e.g., Fig. 6A -- L < 5μm] from the first wire (see the entire document, including Page 13, Line 8 - Page 14, Line 22);

a second substrate [e.g., Fig. 10; 48] that is disposed opposite to the first substrate at a second distance from the first substrate;

a liquid crystal layer [e.g., Fig. 10; 50] disposed between the first and second substrates,

the liquid crystal layer having a thickness; and

a spacer [e.g., Fig. 10; 51] disposed between the first and second substrates,

the spacer prescribing the thickness of the liquid crystal layer,

wherein the first wire has a predetermined surface [e.g., Fig. 6A; top surface of 32; Fig. 10; top surface of 47] that does not directly abut the first substrate,

the predetermined surface of the first wire being disposed on a side [e.g., top side of the TFT array substrate] of the first substrate that directly abuts the liquid crystal layer (see the entire document, including Fig. 10),

wherein the second wire has a predetermined surface [e.g., Fig. 6A; top surface of 33] that does not directly abut the first substrate,

the predetermined surface of the second wire being disposed on the side of the first substrate that directly abuts the liquid crystal layer (see the entire document, including Fig. 10; Page 21, Line 9 - Page 22, Line 14).

Arguably, the ***AAPA*** neglects expressly disclosing the spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer.

However, ***Watanabe*** discloses a spacer [e.g., Fig. 1; 104, 105, 108, and 109 working in conjunction/unison] in direct physical contact with the entire predetermined surface of at least one of the first and second wires [e.g., Fig. 1; 102, 103] such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer [e.g., Fig. 1; 107] (see the entire document, including Column 3, Lines 17-25).

The ***AAPA*** and ***Watanabe*** are analogous art, because they are both from the shared field of liquid crystal display devices.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to use ***Watanabe's*** spacer [e.g., Fig. 1; 104, 105, 108, and 109 working in conjunction/unison] as the ***AAPA's*** spacer [e.g., Fig. 10; 51], so as to the entire panel uniformly with a prescribed gap and for fixing the alignment of the pair of substrates, resulting in a spacer that is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer, as instantly claimed.

It would have been obvious to one of ordinary skill in the art at the time of invention because all the claimed elements were known in the prior art and one skilled in the art could have combined ***Watanabe's*** teachings [e.g., uniform spacers] with the ***AAPA's*** image display element as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of invention, because the substitution of one known spacer for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of invention, because the technique for improving (by providing increased uniformity and insulative

functionality) this particular class of display device was part of the ordinary skill in the art, in view of the teaching of the technique for improvement in other situations.

It would have been obvious to one of ordinary skill in the art at the time of invention, because this particular known accurate gap spacer forming technique was recognized as part of the ordinary capabilities of one skilled in the art.

It would have been obvious to one of ordinary skill in the art at the time of invention, because a person of ordinary skill has good reason to pursue the known options within his or her technical grasp (i.e., providing wire insulating spacers). If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense.

It would have been obvious to one of ordinary skill in the art at the time of invention, because design incentives or market forces provided a reason to make a entire wire insulating spacer adaptation, and the invention resulted from application of the prior knowledge in a predictable manner.

See KSR International Co. v. Teleflex Inc., et al., Docket No. 04-1350 (U.S. 30 April 2007).

Regarding claim 5; the ***AAPA*** discloses a potential of the second wire is substantially equal to a potential of a scan line other than the one scan line (see the entire document, including Page 13, Lines 8-21).

Regarding claim 16, this claim is rejected by the reasoning applied in rejecting claim 4; furthermore, the ***AAPA*** discloses a data line driving circuit and a scan line driving circuit (see the entire document, including Page 1, Lines 10-25).

Regarding claim 17, this claim is rejected by the reasoning applied in claim 5.

Regarding claim 21; the ***AAPA*** discloses the first distance from the second wire to the first wire is less than or equal to 5μm [e.g., Fig. 6A; wherein the distance measurement is taken from the left-side edge of the first wire to the right-side edge of the second wire, for instance] (see the entire document, including Page 13, Line 8 - Page 14, Line 22).

Regarding claim 22, this claim is rejected by the reasoning applied in claim 21.

Regarding claim 24; the ***AAPA*** discloses the spacer extends through the thickness of the liquid crystal layer such that the spacer is in direct physical contact with the at least one of the first and second wires, the first substrate, and the second substrate (see the entire document, including Fig. 6B).

Regarding claim 27, this claim is rejected by the reasoning applied in claim 24.

29. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the instant ***Application's Admitted Prior Art (AAPA)*** and ***Watanabe et al (US 5,150,239 A)*** as applied to claims 4 and 16 above, and further in view of ***Kwon (US 6,486,930 B1)***.

Regarding claim 8, the ***AAPA*** does not expressly disclose any particular display element arrangement of pixel electrodes and switching devices.

However, ***Kwon*** discloses a first pixel electrode [e.g., Fig. 5A; 71c] and a second pixel electrode [e.g., Fig. 5A; 73c] that are supplied with display signals from one of the data lines [e.g., Fig. 5A; D1];

a first switching device [e.g., Fig. 5A; 71b] that controls a supply of the display signals in the one of the data tine lines,

wherein the first switching device is electrically connected between the one of the data lines and the first pixel electrode,

the first switching device having a gate electrode;

a second switching device [e.g., Fig. 5A; 71a] that is electrically connected between the gate electrode of the first switching device and the one of the scan lines [e.g., Fig. 5A; G1]; and

a third switching device [e.g., Fig. 5A; 73] that is connected to the one of the data lines, the third switching device controlling a supply of the display signals to the second pixel electrode (see the entire document, including Column 3, Line 59 - Column 4, Line 36).

The ***AAPA*** and ***Kwon*** are analogous art, because they are both from the shared field of active matrix liquid crystal display devices.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the substrate fabrication techniques of the ***AAPA*** to manufacture ***Kwon's*** multiplexed image structure, so as to reduce the necessary number of data lines.

Regarding claim 18, this claim is rejected by the reasoning applied in claim 8; furthermore, ***Kwon*** discloses a first pixel electrode [e.g., Fig. 5A; 73c] and a second pixel electrode [e.g., Fig. 5A; 71c] that are supplied with a first display signal from the display signals from the data line driving circuit via a same first data line [e.g., Fig. 5A; D1];

a first switching device [e.g., Fig. 5A; 73] that controls the supply of the first display signal from the first data line to the first pixel electrode,

the first switching device being driven based on a first scan signal from the scan signals supplied from the scan line driving circuit via a first scan line [e.g., Fig. 5A; G1];

a second switching device [e.g., Fig. 5A; 71b] that controls a supply of the first display signal from the first data line to the second pixel electrode,

the second switching device being driven based on a second scan signal [e.g., Fig. 5A; G2] from the scan signals supplied from the scan line driving circuit via a second scan line subsequent to the first scan line; and

a third switching device [e.g., Fig. 5A; 71a] that is driven based on the first scan signal supplied from the first scan line,

the third switching device controlling ON and OFF of the second switching device (see the entire document, including Column 3, Line 59 - Column 4, Line 36).

Response to Arguments

30. Applicant's arguments filed 10 April 2008 have been fully considered but they are not persuasive.

The Applicant contends, "*the [**AAPA**] does not teach a spacer that is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer and that prescribes the second distance between the substrate and counter substrate*" (see Page 8 of the Response filed 10 April 2008). However, the examiner respectfully disagrees.

The ***AAPA*** discloses a first wire [Fig. 6B; 32] electrically connected to one of the scan lines; a second wire [Fig. 6B; 33] arranged at a first distance of less than or equal to 10μm [Fig. 6A -- L < 5μm] from the first wire; and a spacer [Fig. 6B; 34] disposed between the first and second substrates, the spacer prescribing the thickness of the liquid crystal layer [at least the liquid crystal layer thickness between the top/second substrate 48 and the spacer 34], and wherein the spacer is in direct physical contact with the entire predetermined surface of at least one of the first and second wires [Fig. 6B; top surface of 32] such that no portion of the at least

one of the first and second wires is in direct physical contact with the liquid crystal layer (see Fig. 6B; Page 13, Line 8 - Page 14, Line 22).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Here, ***Watanabe*** discloses a spacer [Fig. 1; 104, 105, 108, and 109 working in conjunction/unison] in direct physical contact with the entire predetermined surface of at least one of a first and second wire [Fig. 1; 102, 103] such that no portion of the at least one of the first and second wires is in direct physical contact with a liquid crystal layer [Fig. 1; 107] (see Column 3, Lines 17-25).

The Applicant contends, "***Watanabe*** *does not cure the deficiencies of the [**AAPA**] because* ***Watanabe*** *does not teach or suggest a spacer that prescribes the thickness of the liquid crystal layer and that is in direct physical contact with the entire predetermined surface of at least one of the first and second wires such that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer. The PTO states that* ***Watanabe*** *discloses an insulator [Fig. 1; 104] which inherently takes up space, and thereby fully qualifies as a spacer. (Pages 16-17 of the Office Action.) However, the insulating layer 104 of* ***Watanabe*** *cannot prescribe the thickness of the liquid crystal layer because no matter how thick the insulating layer 104 is, the thickness of the liquid crystal layer will not be influenced. Indeed,*

the thickness of the liquid crystal layer 107 of ***Watanabe*** *depends on the spacer 108 of* ***Watanabe****. Accordingly, the insulating layer 104 of* ***Watanabe*** *cannot be considered as the spacer of claim 4 or claim 16*" (see Page 8 of the Response filed 10 April 2008). However, the examiner respectfully disagrees.

Watanabe's spacer [Fig. 1; 104, 105, 108, and 109 working in conjunction/unison] most certainly can (and does) prescribe the thickness of the liquid crystal layer [Fig. 1; 107]. For example: If any of ***Watanabe's*** spacer components [Fig. 1; 104, 105, 108, and 109] were made thicker, this would inherently result in further distancing the two opposing substrates, and create a thicker liquid crystal layer. If any of ***Watanabe's*** spacer components [Fig. 1; 104, 105, 108, and 109] were made thinner, this would inherently result in a converging of the two opposing substrates, and create a thinner liquid crystal layer.

The Applicant contends, "*Also, the rejection based on the [**AAPA**] and* ***Watanabe*** *is improper the proposed combination would make the device of the [**AAPA**] inoperable if the insulating layer 104 of* ***Watanabe*** *is used as proposed by the PTO. Because the spacer of claim 4 or 16 needs to prescribe the thickness of the liquid crystal layer, it means that the spacer shall span and maintain the gap for filling the liquid crystal layer therein. If we combine the spacer 51 of the [**AAPA**] (that spans and maintains the gap for filling the liquid crystal layer therein) with the insulating layer 104 of* ***Watanabe*** *(that extends along the entire surface of the substrate), the spacer will span the gap along the entire surface of the substrate, and therefore there will be no place for the liquid crystal layer. In other words, if the insulating layer 104 of* ***Watanabe*** *is used*

*in the device of the [**AAPA**], the entire surface of the substrate will be covered. If such a layer is used to prescribe the thickness of the liquid crystal layer (i.e., expand towards the counter substrate), the entire gap between the substrate and the counter substrate will be filled with the insulating layer. As a result, there is no room left for the liquid crystal layer. Accordingly, one with ordinary skill in the art would not consider using the insulating layer 104 of **Watanabe** for prescribing the thickness of the liquid crystal layer because it would prevent any gap for the liquid crystal layer to be placed, thus making the device of [**AAPA**] inoperable. Such a modification is not obvious because a proposed combination cannot be obvious if it makes the device of the primary reference inoperable.*" (see Page 9 of the Response filed 10 April 2008). However, the examiner respectfully disagrees.

The combination of the ***AAPA*** and ***Watanabe*** isn't meant to simply replace the ***AAPA's*** spacer [Fig. 10; 51] with ***Watanabe's*** insulation layer [Fig. 1; 104].

The combination would add ***Watanabe's*** insulation layer [Fig. 1; 104] on top of the ***AAPA's*** wire [Fig. 10; 47]; then add ***Watanabe's*** alignment film [Fig. 1; 105] on top of that; and then use ***Watanabe's*** spacers [Fig. 1; 108], ***Watanabe's*** adhesives [Fig. 1; 109], and ***Watanabe's*** liquid crystal layer [Fig. 1; 109] to complete the "display sandwich" contained between the two opposing substrates.

Another way of looking at it: The combination of the ***AAPA*** and ***Watanabe*** substitutes one liquid crystal and spacer arrangement (sandwiched between opposing substrates) for another.

The combination of the ***AAPA*** and ***Watanabe*** would still include a liquid crystal layer (after all, both references separately include a liquid crystal layer... therefore actually there exists

no motivation to remove the liquid crystal layer from the combination), and as such the combination would indeed operate quite effectively.

The Applicant contends, "*Furthermore, the rejection based on the [**AAPA**] and **Watanabe** is improper because the proposed combination would change the function of the insulating layer 104 of **Watanabe** if the insulating layer 104 of **Watanabe** is used to prescribe the thickness of the liquid crystal layer. Indeed, the insulating layer cannot be considered prescribing a thickness of the liquid crystal layer because no matter how thick the insulating layer 104 is, the thickness of the liquid crystal layer 107 will not be influenced. Furthermore, the spacer 108 of **Watanabe** is clearly used for prescribing the thickness of the liquid crystal layer. The PTO asserts that the spacer 51 of the [**AAPA**] and the insulating layer 104 of **Watanabe** are used for the same purpose of preventing/limiting electricity. Applicant respectfully disagrees because the purpose of the spacer 51 of the [**AAPA**] is prescribing the distance between the substrates, as clearly stated in page 21, lines 14-15 of the specification, which is the same as the spacer 108 of **Watanabe**. To use the insulating layer 104 of **Watanabe** for prescribing the thickness of liquid crystal layer is clearly using the insulating layer 104 for a different purpose, a situation quite different from Ex parte Smith, Board of Patent Appeals and Interferences (decided June 25, 2007) (precedential decision)*" (see Page 10 of the Response filed 10 April 2008). However, the examiner respectfully disagrees.

Watanabe's spacer [Fig. 1; 104, 105, 108, and 109 working in conjunction/unison] prescribes the thickness of the liquid crystal layer [Fig. 1; 107] inherently. Much in the same way

that adding extra bologna between two slices of bread inherently prescribes the thickness of the resulting sandwich. Noticing that physical matter takes up space is not a "new purpose," it's a fact of life.

Applicant's arguments pertaining to "*direct physical contact with the entire exposed surface of at least one of a first and second wires*" are not commensurate in scope with current/newly amended claim language (see Pages 11-13 of the Response filed 10 April 2008). Therefore, the examiner respectfully considers such arguments moot at this juncture.

Applicant's arguments with respect to claims 4, 5, 8, 16-18, and 21-28 have been considered but are moot in view of the new ground(s) of rejection.

By such reasoning, rejection of the claims is deemed necessary, proper, and thereby maintained at this time.

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The documents listed on the attached '*Notice of References Cited*' are cited to further evidence the state of the art pertaining to image display elements.

32. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571) 272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeff Piziali/
Primary Examiner, Art Unit 2629
16 July 2008